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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,761	03/24/2004	Jeffrey P. Armstrong	031383-9083-01	4276

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EXAMINER	
DRODGE, JOSEPH W	

ART UNIT	PAPER NUMBER
1723	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/807,761	ARMSTRONG ET AL.	
	Examiner	Art Unit	
	Joseph W. Drodge	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-12 and 35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 5-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, "the oil" lacks antecedent basis, independent claim 1 only refers to "fuel".

For claims 6-10, it is unclear whether the "multi-stage chiller, or the "aftercooler" are components that are encompassed in the purifier's operability to chill out flow of fuel to condense and remove undesirable compounds.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1,2, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nathan patent 4,450,900 in view of Anderson et al patent 5,031,690.

Nathan discloses a conditioning system for purifying gas or air that is utilized in an aircraft, comprising: platform 41: source of gas to be conditioned 50, inlet 20, outlet 41, outlet connection 51 inlet cleaner 21/22 that comprises a filter 21 and another absorbent separator 22, compressor 26, purifier 25/27 to chill the gas so as to remove at least a portion of undesired water compound from the flow (column 3, lines 17-22) . Recitations of the system being used for purifying gas or air that is utilized as fuel in an engine are not considered structural limitations, and are considered as merely reciting intended end use of the system. Neither a source of fuel or actual engine is actually positively recited.

The claims differ in requiring the entire system being mounted on a "skid" rather than merely mounted on a platform. However, Anderson et al teach another conditioning system for purifying gas that is utilized in an aircraft that may be skid-mounted (column 5, lines 5-8). It would have been obvious to one of ordinary skill in the air/gas conditioning arts to have substituted the skid of Anderson for more general

platform of Nathan so as to facilitate portability of the system such as by allowing it to be relocated or moved by fork-lift or similar conveyance.

For claim 35, also see heater or heat exchanger 40.

For claim 2, the inlet cleaner 22 absorbs toxic substances in gas or liquid form (column 3, lines 10-11).

Claims 4-7 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nathan patent 4,450,900 in view of Anderson et al patent 5,031,690 as applied to claims 1 and 2 above, and further in view of Koethe patent 6,360,730.

Claims 4-12 further differ in recited details of the compressor or of the purifier/chiller.

For claim 4, Koethe teaches a compressor having a fuel/oil separator (various of the filters and dryers in forementioned text inherently remove any oil) to enable the smooth and reliable operation of the compressor; for claim 5, a temperature-controlled valve to selectively divert fuel to a cooler (discussion of temperature chiller 180 and control unit 182 and associated controlled circulation infers a valve, see column 8, lines 25-36 and column 9, lines 32-40) to enable the compressor to maintain a stable temperature; for claims 6-10, multi-stage chiller including at least two stages, drains, heat-exchangers (column 8, line 37-column 9, line 28 regarding stages 184 and 186 & heat exchangers 85 and 87 of column 13, lines 8-28; the filter dryer 214/column 9, lines 1-3 and "super-water separator of column 9, lines 37-38 inherently associated with drains), recycling of heat between stages and refrigerant heat exchangers (see cited text bridging columns 8-9) so as to enable more efficient and completer removal of all of

the moisture; for claim 11, a bypass/recirculating loop (column 9, lines 18-22, and for claim 12, the various forementioned filters and other separators operable to purge various contaminants from the fuel being purified, again providing reliable compressor operation.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nathan patent 4,450,900 in view of Anderson et al patent 5,031,690 as applied to claims 1 and 2 above, and further in view of Provost patent 5,722,229. Claim 3 further differs in requiring the compressor to have a variable-speed drive. However, Provost teaches such drive with a compressor (columns 2-3). It would have been also obvious to one of ordinary skill in the art to have utilized such variable speed drive in the Nathan/Anderson/Koethe system, in order to maintain highly accurate control of heat exchange temperatures.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nathan patent 4,450,900 in view of Anderson et al patent 5,031,690 and Koethe patent 6,360,730 as applied to claims 1,2,6 and 7 above, and further in view of Provost patent 5,722,229. Claim 8 additionally requires an activated carbon filter in treating fuel oil, although Koethe discloses an adsorption unit at column 8, line 11; Seagle teaches such at column 3, lines 45-50 and Table of column 7. It would have been additionally obvious to the skilled artisan to have incorporated such activated carbon unit as an

adsorbing means of the Nathan/Anderson/Koethe system, in order to maintain a highly sterilized fuel oil supplied, since fuel oil is susceptible to bacterial contamination. Business Center (EBC) at 866-217-9197 (toll-free).

Applicant's arguments with respect to claims 1-12 and 35 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, David Roy Sample, can reached at 571-272-1376. The fax phone number for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

September 17, 2007

JOSEPH DRODGE
PRIMARY EXAMINER